AMENDMENTS TO THE CLAIMS:

1.   (Currently amended) A method of performing error diffusion, the method comprising the steps of:

simultaneously processing image data for at least two pixels in a row of pixels, said at least two pixels comprising a first group of pixels and a last pixel, said last pixel abutting a group of pixels to be processed next in said row of pixels;

reducing the precision of said image data to produce a modified image data word and an error word for each pixel;

propagating a portion of said error word for each pixel in said first group to two pixels in a next row of pixels; and

propagating a first portion of said error word for said last pixel to a pixel in said next row of pixels and a second portion of said error word for said last pixel to a pixel in said group of pixels to be processed next.

2.   (Original) The method of Claim 1 further comprising the steps of:

generating a pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said first group comprises:

dividing said error word into a first and a second portion;

subtracting said pseudo random number from said first portion to produce a first modified error word;

adding said pseudo random number to said second portion to produce a second modified error word; and

adding said first and said second modified error words to image data for a first and second pixel in said next row of pixels.

3.   (Original) The method of Claim 2, where said first modified error word is added to image pixel data for a pixel directly below the pixel generating the error signal.

4.   (Original) The method of Claim 2, where said second modified error word is added to image pixel data for a pixel directly below and to the right of the pixel generating the error signal.

<div align="center">TI-29212 Amendment - Page 2</div>

5.   (Original) The method of Claim 1 further comprising the steps of:

generating a pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said

second group comprises:

dividing said error word into a first and a second portion;

subtracting said pseudo random number from said first portion to

produce a first modified error word;

adding said pseudo random number to said second portion to produce a

second modified error word;

adding said first modified error word to image data for a pixel in said

next row of pixels; and

adding said second modified error word to image data for a pixel in said

group of pixels to be processed next.

6.   (Original) The method of Claim 1 further comprising the steps of:

generating a pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said

second group comprises:

dividing said error word into a first and a second portion;

adding said pseudo random number to said first portion to produce a

first modified error word;

subtracting said pseudo random number from said second portion to

produce a second modified error word;

adding said first modified error word to image data for a pixel in said

next row of pixels; and

adding said second modified error word to image data for a pixel in said

group of pixels to be processed next.

7.   (Previously presented) The method of Claim 1 further comprising the steps of:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said first

TI-29212 Amendment - Page 3

group comprises:

dividing said error word into a first and a second portion;

adding said first pseudo random number to said first portion to produce a first modified error word;

adding said second pseudo random number to said second portion to produce a second modified error word; and

adding said first and said second modified error words to image data for a first and second pixel in said next row of pixels.

8.   (Original) The method of Claim 1 further comprising the steps of:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

adding said first pseudo random number to said first portion to produce a first modified error word;

adding said second pseudo random number to said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

9.   (Previously presented) The method of Claim 1 further comprising the steps of:

generating a first pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said first group comprises:

dividing said error word into a first and a second portion;

adding said pseudo random number to said first portion to produce a first modified error word;

subtracting said pseudo random number from said second portion to

TI-29212 Amendment - Page 4

produce a second modified error word; and

adding said first and said second modified error words to image data for a first and second pixel in said next row of pixels.

10.   (Original) The method of Claim 1 further comprising the steps of:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

adding said first pseudo random number to said first portion to produce a first modified error word;

subtracting said second pseudo random number from said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

11.   (Original) The method of Claim 1 further comprising the steps of:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

subtracting said first pseudo random number from said first portion to produce a first modified error word;

adding said second pseudo random number to said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

TI-29212 Amendment - Page 5

12.   (Currently amended) A display system comprising:

    a controller for receiving and processing pixelated image data said controller:

        simultaneously processing image data for at least two pixels in a row of pixels, said at least two pixels comprising a first group of pixels and a last pixel, said last pixel abutting a group of pixels to be processed next <u>in said row of pixels</u>;

        reducing the precision of said image data to produce a modified image data word and an error word for each pixel;

        propagating a portion of said error word for each pixel in said first group to two pixels in a next row of pixels; and

        propagating a first portion of said error word for said last pixel to a pixel in said next row of pixels and a second portion of said error word for said last pixel to a pixel in said group of pixels to be processed next;

    a light source for generating a beam of light along a first light path; and

    a light modulator for selectively modulating light along said first light path in response to image data signals from said controller.

13.   (Original) The display system of Claim 12, said controller:

    generating a pseudo random number; and

    wherein said propagating a portion of said error word for each pixel in said first group comprises:

        dividing said error word into a first and a second portion;

        subtracting said pseudo random number from said first portion to produce a first modified error word;

        adding said pseudo random number to said second portion to produce a second modified error word; and

        adding said first and said second modified error words to image data for a first and second pixel in said next row of pixels.

14.   (Original) The display system of Claim 12, said controller:

    generating a pseudo random number; and

TI-29212 Amendment - Page 6

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

subtracting said pseudo random number from said first portion to produce a first modified error word;

adding said pseudo random number to said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

15.   (Original) The display system of Claim 12, said controller:

generating a pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

adding said pseudo random number to said first portion to produce a first modified error word;

subtracting said pseudo random number from said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

16.   (Previously presented) The display system of Claim 12, said controller:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said first group comprises:

dividing said error word into a first and a second portion;

TI-29212 Amendment - Page 7

adding said first pseudo random number to said first portion to produce a first modified error word;

adding said second pseudo random number to said second portion to produce a second modified error word; and

adding said first and said second modified error words to image data for a first and second pixel in said next row of pixels.

17.   (Original) The display system of Claim 12, said controller:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said second group comprises:

dividing said error word into a first and a second portion;

adding said first pseudo random number to said first portion to produce a first modified error word;

adding said second pseudo random number to said second portion to produce a second modified error word;

adding said first modified error word to image data for a pixel in said next row of pixels; and

adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

18.   (Original) The display system of Claim 12, said controller:

generating a first and second pseudo random number; and

wherein said propagating a portion of said error word for each pixel in said first group comprises:

dividing said error word into a first and a second portion;

adding said pseudo random number to said first portion to produce a first modified error word;

subtracting said pseudo random number from said second portion to produce a second modified error word; and

adding said first and said second modified error words to image data for

TI-29212 Amendment - Page 8

a first and second pixel in said next row of pixels.

19.   (Original) The display system of Claim 12, said controller:

 generating a first and second pseudo random number; and

 wherein said propagating a portion of said error word for each pixel in said second group comprises:

  dividing said error word into a first and a second portion;

  adding said first pseudo random number to said first portion to produce a first modified error word;

  subtracting said second pseudo random number from said second portion to produce a second modified error word;

  adding said first modified error word to image data for a pixel in said next row of pixels; and

  adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

20.   (Original) The display system of Claim 12, said controller:

 generating a first and second pseudo random number; and

 wherein said propagating a portion of said error word for each pixel in said second group comprises:

  dividing said error word into a first and a second portion;

  subtracting said first pseudo random number from said first portion to produce a first modified error word;

  adding said second pseudo random number to said second portion to produce a second modified error word;

  adding said first modified error word to image data for a pixel in said next row of pixels; and

  adding said second modified error word to image data for a pixel in said group of pixels to be processed next.

<div align="center">TI-29212 Amendment - Page 9</div>